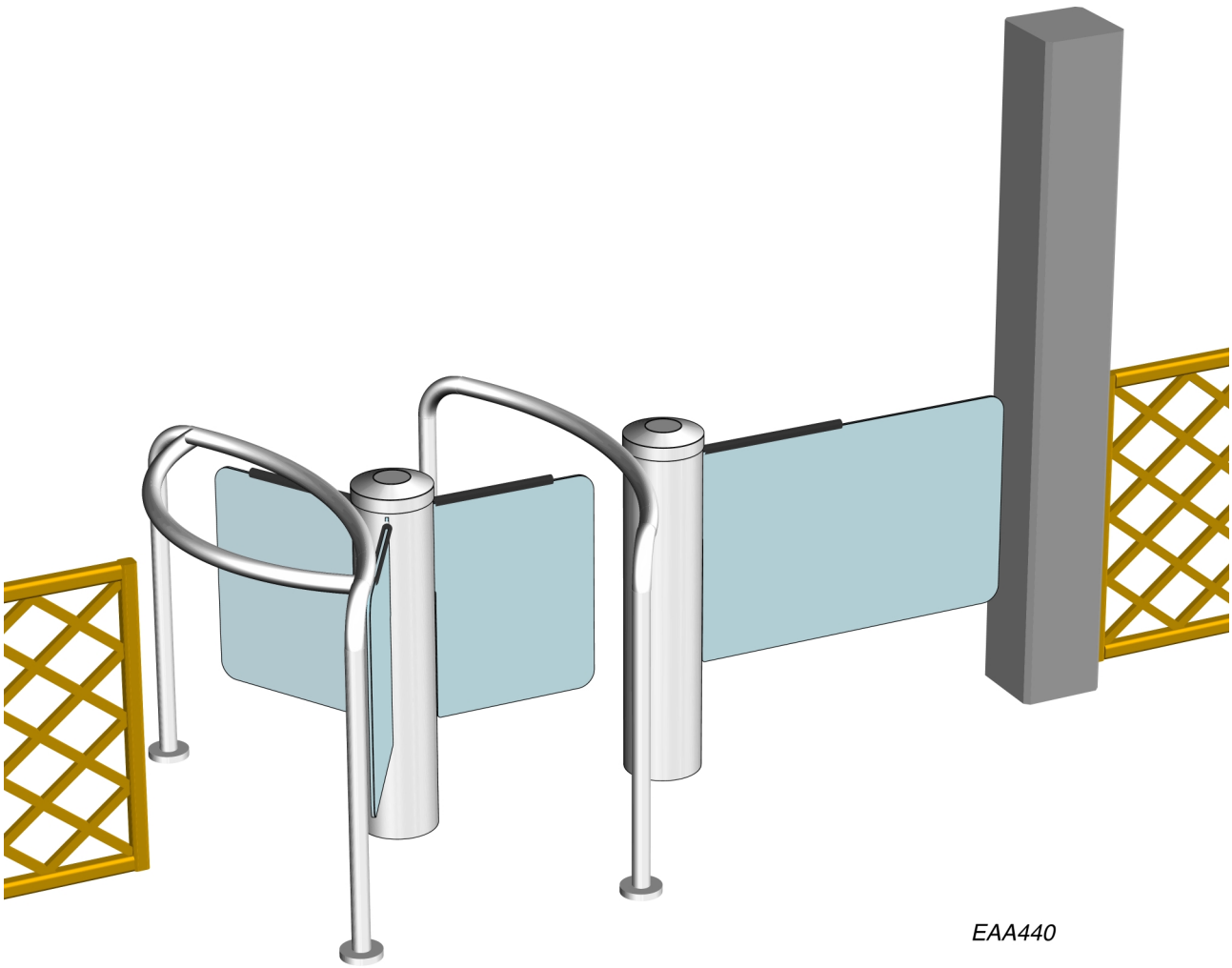
Besam EGR/EGS
Service manual



EAA440

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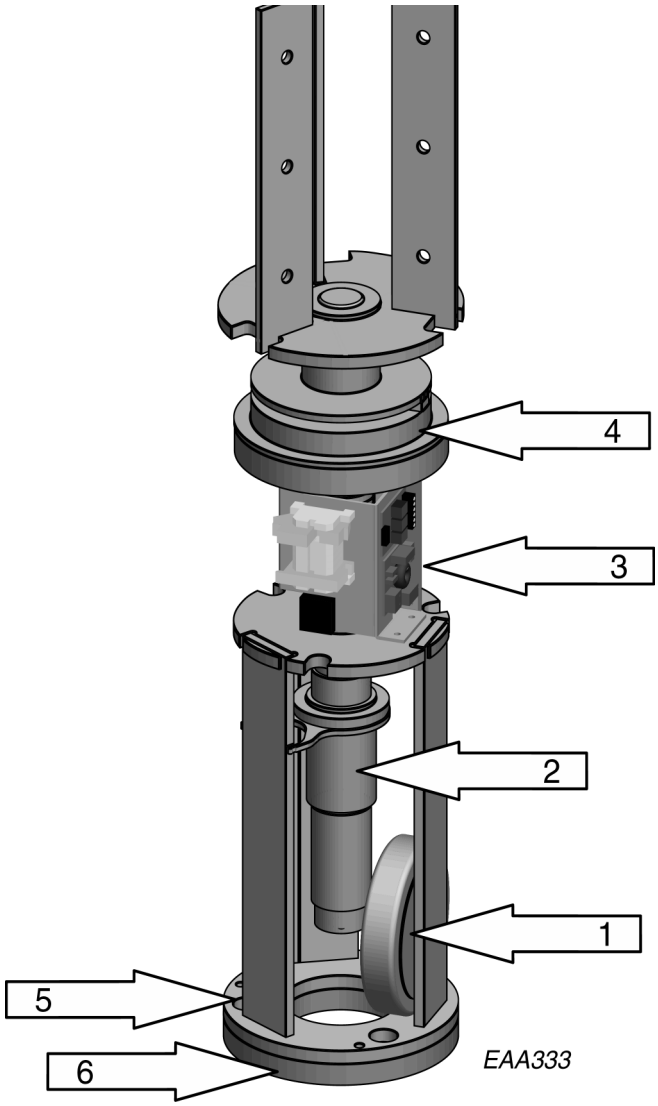
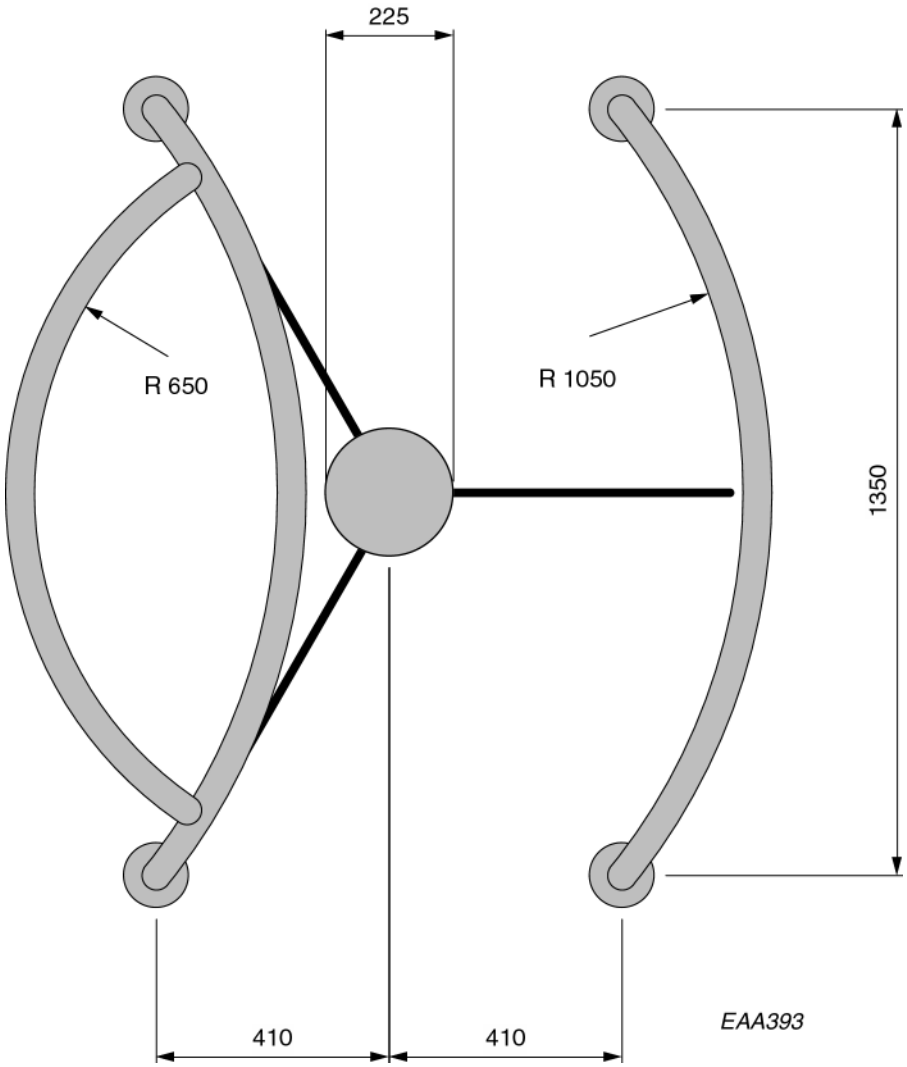
1.0 Main Parts

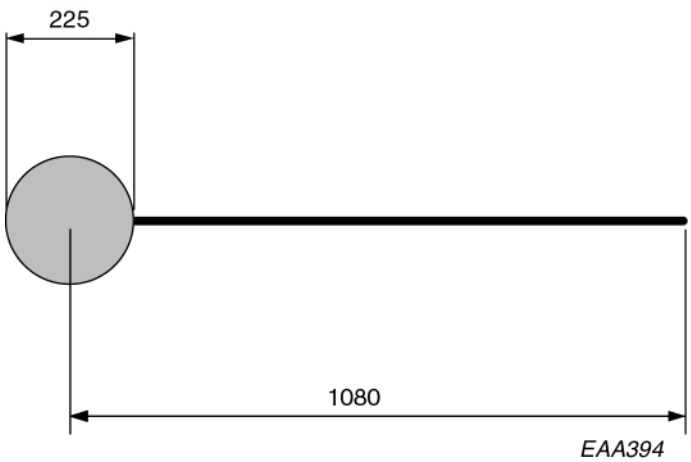


No	Description
1	Transformer
2	Drive unit (Motor, Gear box and position encoder)
3	Control unit
4	Brake
5	Support ring
6	Floor ring

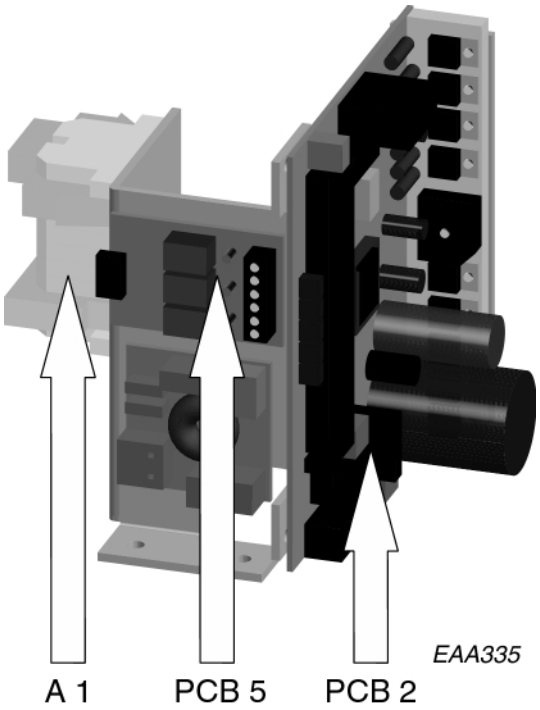
1.1 Dimensions EGR



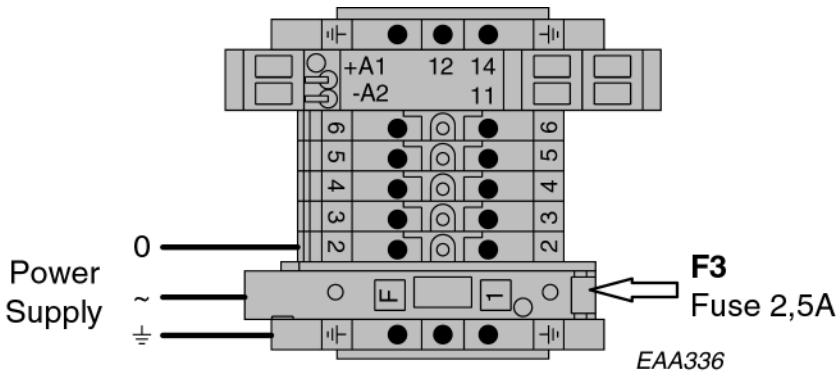
1.2 Dimensions EGS



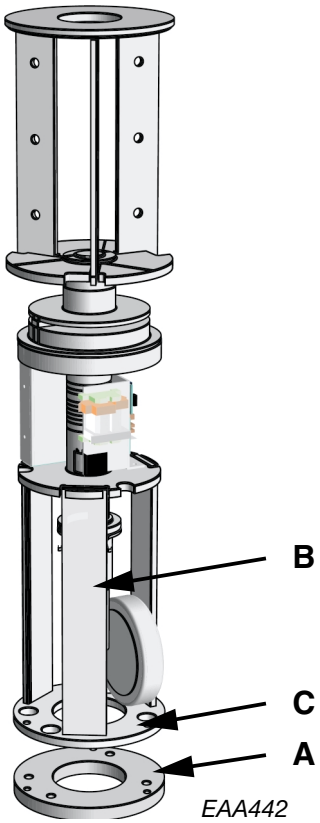
1.3 Control unit



1.3.1 Connection block A1



2.0 Installation



1 Fix the mounting plate (A) to the floor using the 4 no. expansion-shell bolts.

2 Put the frame (B) on top of the mounting plate.

3 Fix the frame to the mounting plate loose.

4 Level the frame by adjusting the three allen-screws (C).

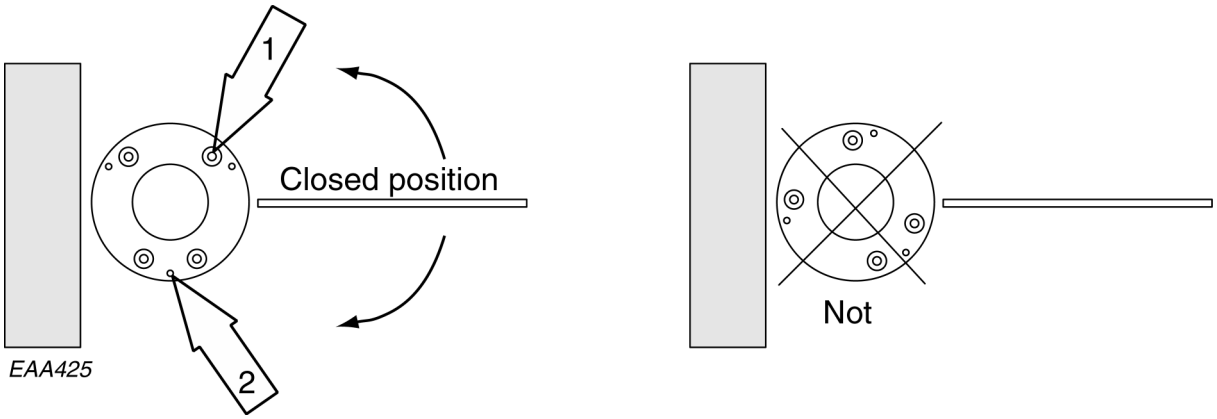
5 Tighten the fixing screws.

6 Connect the mains power and the activation units according to the service manual and EG-decal.

7 Check all functions.

8 Fix the glass to the frame.

9 Fix the stainless steel cover to the frame.



To avoid getting the electronics against the wall when installing EGS make sure that the floor ring is oriented as showed above to the left.

2.1 Start up

1 Turn on the power, give an inner or outer impulse and the gate will do three attempt in that direction to find it's home position.

2 Final adjustment of home position will be done with potentiometer number RT5.

3 EGS only, fix the glass on that glass holder that is nearest to closed position.

3.0 System functions

3.1 Power failure

In case of a power failure the gate rotates free. When the power comes back the start up procedure have to be repeated.

3.2 Impulse unit signal

All input signals are related to the 0V connections (4, 7, 11).

The input signal from the impuls units activating the gate has to be 0,5 sec long

3.3 Connections

No	Type	Description
1		Not used
2	Input	Opening impulse counter clockwise
3	Input	Opening impulse clockwise
4		0 V
5	Input	**Reception impulse** counter clockwise
6	Input	**Reception impulse** clockwise
7		0 V
8	Input	0-pulse, home position
9	Input	Fire alarm
10	Input	ON/OFF
11		0 V
12	Signal	Card reader inner response signal
13	Signal	General alert
14	Signal	Card reader outer response signal
15	Signal	Brake
16	Signal	Brake
17	Output	+ 24 V DC max. 100mA
18		0 V
19	Output	+ 18 V DC max. 530mA
20		0 V
MC	Output	Motor

3.4 Adjustments

3.4.1 Potentiometers EGR/EGS

RT1
EGR - Rotation speed (1-10 RPM). Turned max gives maximum speed.
EGS - Rotation speed (1-10 RPM). Turned max gives maximum speed.

RT2
EGR - Not used
EGS - Extended opening angle 70-120°. For counter clockwise (CCW) opening.

RT3
EGR - Not used.
EGS - Extended opening angle 70-120°. For clockwise (CW) opening.

RT4
EGR - Adjustment of the time between activation and start of rotation (0-10 sec).
EGS - Adjustment of the time that the gate stays in open position (0-30 sec).

RT5
EGR - Adjustment of home position (±10°)
EGS - Adjustment of home position (±10°)

3.4.2 Function selectors

DIP switch	Description	OFF	ON
S1	Type of gate EGS/EGR	EGS	EGR
S2	Time delayed start (EGR only)	No	Yes
S3	Not used	-	-
S4	Not used	-	-
S5	Stacking function. Max stack = 5 impulses.	No	Yes
S6	Brake active when the gate is in open position (EGS only)	No	Yes
S7 - EGR	Relock after start time-out	No	Yes
S7 - EGS	Servo assist. Push and go	No	Yes
S8	Mode of operation	Test	Normal

Bold types indicates factory setting

4.0 EGR

4.1 EGR Terminal J1 input.

4.1.1 On/Off Connection 10

When the gate is locked (connection 10 connected to 0V), the brake is activated and the system reacts only on fire alarm indication or when the reception impulse unit is activated.

When the gate is unlocked (connection 10 not connected to 0V), the gate operates according to settings.

4.1.2 Access control

Connection 2 clockwise or 3 counter clockwise

When the gate is activated from the impulse unit, the gate rotates 120°.

4.1.3 Reception impulse

Connection 5 clockwise or 6 counter clockwise.

When the gate is activated with the reception impulse unit, the gate rotates as long as it is activated. When the reception impulse unit is deactivated, the gate rotates to closed position.

The reception impulse unit overrides the ON/OFF input.

4.1.4 Fire alarm Connection 9

The gate rotates free as long as the fire alarm input is activated.

The fire alarm input impulse overrides the ON/OFF input.

To restart the system after a fire alarm indication, activate the reception impulse unit.

4.2 EGR Terminal J2 output

4.2.1 General alert Connections 1 and 2

Diagnostic/error codes

Steady signal	Fire alarm
Code 10000	Home position pulse missing
Code 11000	Wrong motor direction
Code 11100	Blocked gate

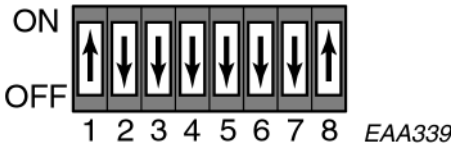
1= Short activation of output.
0= Pause.
E.g. 11000 = two short activations of the output followed by a pause, then the sequence is repeated.

4.2.2 Card reader response signal

Connections 3 and 4 counter clockwise, 5 and 6 clockwise

It is possible to get a card reader response signal out of the system

4.3 EGR DIP-switch setting



EGR - S1 = ON

4.3.1 Time delay start (S2)

S2 = ON
A time delay between activation and start of rotation can be set between 0 and 10 sec. with RT 4.

4.3.2 Servo assist (S7)

S7 = ON (S2 = ON)
Relock function active
When the gate is activated from the impulse unit, the gate remains in its closed position with the brake deactivated until it is manually pushed to start. After being pushed to start the gate rotates 120° clockwise or counter clockwise depending on which impulse unit activating the gate. The time between activation from the impulse unit to the manually start of the gate can be set between 0 and 10 sec. If the gate is not pushed to start within the time, the brake is activated, and the gate has to be activated from the impulse unit again.
Stacking function is not available with this setting.

4.3.3 Stacking function (S5)

S5 = ON
If the stacking function is set, the gate can stack up to 5 impulses from each direction. When the gate have started in one direction it always empty this stack before taking care of the impulses from the other direction. If new impulses are added to the stack in the first direction before it is emptied, the impulses from the other direction have to wait for them as well.

5.0 EGS

5.1 EGS Terminal J1 input

5.1.1 On/Off

Connection 10

When the gate is locked (connection 10 connected to 0V), the brake is activated and the system reacts only on fire alarm indication or when the reception impulse unit is activated.

When the gate is unlocked (connection 10 not connected to 0V), the gate operates according to settings.

5.1.2 Access control

Connection 2 counter clockwise or 3 clockwise

When the gate is activated from the impulse unit, the gate opens 90°-120°.

5.1.3 Reception impulse

Connection 5 counter clockwise or 6 clockwise

When the gate is activated with the reception impulse unit, the gate will stay open as long as the impulse is activated. When the reception impulse unit is released, the gate will close.

The reception impulse unit overrides the ON/OFF input.

5.1.4 Fire alarm

Connection 9

The gate rotates free as long as the fire alarm input is activated.

The fire alarm input impulse overrides the ON/OFF input.

To restart the system after a fire alarm indication, activate the reception impulse unit.

5.2 EGS Terminal J2 output

5.2.1 General alert Connections 1 and 2

Diagnostic/error codes

Steady signal	Fire alarm
Code 10000	Home position puls missing
Code 11000	Wrong motor direction
Code 11100	Blocked gate

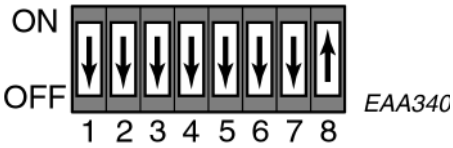
1= Short activation of output.
0= Pause.
E.g. 11000 = two short activations of the output followed by a pause, then the sequence is repeated.

5.2.2 Card reader response signal

Connections 3 and 4 counter clockwise, 5 and 6 clockwise.

It is possible to get a card reader response signal out of the system
Direct response signal (output = input)

5.3 EGS DIP-switch setting



EGS - S1 = OFF

5.3.1 Servo assistance (S7)

S7 = ON
The brake release after an impulse and is not active. The gate remains in its closed position until it is manually pushed to start. After being pushed to start the gate opens 90°-120° clockwise or counter clockwise depending on in which direction the gate has been pushed. After a time delay between 0 and 30 sec the gate close.

5.3.2 Stacking function (S5)

S5 = ON
If the stacking function is set, the gate can stack up to 5 impulses from each direction. When the gate have started in one direction it always empty this stack before taking care of the impulses from the other direction. If new impulses are added to the stack in the first direction before it is emptied, the impulses from the other direction have to wait for them as well.

5.3.3 Brake active in open position (S6)

S6 = ON
The brake is active when the gate is in open position.

Please note that with this function the hold open time, set with potentiometer RT4, shall not be to short.

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